

Program Outcomes

Evaluating, Measuring, and Identifying
Patient Care Benefits and Cost Reduction



Kansas Medical Assistance Program
Retrospective Drug Utilization Review
Provider Education and Intervention Program

Taylor DeRuiter
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Prepared by Taylor DeRuiter, PharmD
Health Information Designs, LLC

Executive Summary

This *Outcomes Assessment* report prepared for the Kansas Medical Assistance Program shows the expected improvements in beneficiary health and cost savings from using retrospective drug utilization review and provider education to effect appropriate prescribing and utilization and, in turn, prevent adverse drug reactions and reduce costs in a targeted beneficiary population.

Program Summary

The use of second-generation antipsychotics may cause serious health risks (e.g., cardiovascular disease, diabetes, dramatic weight gain, and atherogenic lipid profiles). Those starting on antipsychotics should have a baseline screening for risk factors and regular monitoring throughout therapy.

Changes in Criteria Exceptions

At the 6-month evaluation post intervention, appropriate utilization was significantly improved in the target population. Six months after letters were mailed to the prescribers, 88 of the original 138 beneficiaries had at least one claim for any drug and could be evaluated. **Of those remaining 88 beneficiaries, 52.3% of those who were previously found to meet the criteria no longer had the same therapy issue that their prescriber received a letter about.** Based on improved utilization, it is clinically probable that serious adverse outcomes were avoided, and overall drug utilization was significantly reduced.

Criteria	PRE-Intervention	POST-Intervention		
	Beneficiaries with Letter Mailed	Beneficiaries with Any Drug Claim	Beneficiaries with Same Criteria Exception	% Decrease in Criteria Exceptions
May	72	8	0	100%

Background

Health Information Designs (HID), in coordination with DXC Technology, currently performs retrospective drug utilization review (RetroDUR) for Kansas Medical Assistance Programs' fee-for-service population. The total number of unique beneficiaries enrolled in the traditional Medicaid fee-for-service population in State Fiscal Year (SFY) 2018 (July 1, 2017 – June 30, 2018) was 19,098. Prescription claims for approximately 2,842 beneficiaries were processed each month in SFY 2018.

Beneficiary Identification and Prescriber Intervention

In an effort to promote appropriate prescribing and utilization of medications, HID identified beneficiaries receiving antiretroviral (February intervention) and second-generation antipsychotics

(March intervention) and mailed educational letters to their prescribers. When more than one prescriber was attributed to pertinent claims on a patient profile, letters were mailed to all relevant prescribers.

While the intervention letter itself only addressed the medications included in the intervention, HID included a 6-month history of drug claims and diagnoses along with the letter. Prescribers had the opportunity to review the entire beneficiary drug and diagnosis history and make changes to therapies based upon this information. For this reason, whenever intervention letters are sent to prescribers, the impact on total drug utilization should be measured. Therefore, total drug utilization in the targeted population was evaluated for 6 months before and after intervention letters were mailed to determine any change in drug cost.

Analysis Methodology

Each month, HID evaluates Kansas Medical Assistance Program pharmacy claims data against thousands of proprietary criteria. The criteria are developed and maintained by HID clinical pharmacists who review package insert updates, as well as medical literature, to develop the criteria.

Criteria Evaluated

The following criteria were reviewed for the intervention letters mailed in 2018.

- **May 2018:**
- **Therapeutic Duplication:**
 - Therapeutic duplication of antidepressant agents may be occurring.
- **Therapeutic Appropriateness:**
 - Development of osteoporosis and fracture risk associated with proton-pump inhibitors

Beneficiary Selection

A total of 402 beneficiaries potentially met the antiretroviral utilization criteria and 201 beneficiaries met the criteria for development of serious health risks associated with second-generation antipsychotics. The drug history profile for each beneficiary was reviewed by a clinical pharmacist to determine if the beneficiary should be selected for intervention.

After beneficiaries were selected for intervention, educational intervention letters—including a complete drug and diagnosis history profile listing all pharmacy and available diagnosis claims data for the past 6 months—were mailed to the appropriate prescribers. (Prior to mailing, generated letters undergo a quality assurance process. Some letters are not mailed due to various reasons, including missing or invalid prescriber addresses.)

Mailing	Beneficiaries Reviewed	Beneficiaries Initially Selected for Intervention	Letters Generated
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February	402	69	587
March	201	130	182

Once a beneficiary was selected for intervention, the criteria were suppressed by the DUR system for that beneficiary for 6 months.

Prescriber Response Tabulation

The intervention letter and drug history profile included a response form that allowed the prescriber to provide feedback and enabled HID to determine whether any action would be taken in response to the letter. The response form includes standard responses printed on the form that allow the prescriber to check a box for the response that best fits their intended action, as well as space for written comments from the prescriber.

The prescribers were encouraged to return the response forms using the self-addressed stamped envelope included with the intervention letter or via fax. HID tracked all response forms returned as well as all written-in comments from prescribers for evaluation. See the [Results](#) section for these numbers.

Evaluation of Changes in Criteria Exceptions

In an effort to determine the impact of the intervention letters independent of prescriber responses, beneficiary claims were evaluated 6 months after letters were mailed. Since the letters were mailed in May 2018, the 6-month follow up was performed in November 2018. HID first determined how many of the selected beneficiaries continued to have Medicaid benefits and still had active eligibility by determining how many had any claim for any drug in the post-intervention period (May 2018 – August 2018). Following that, HID determined who still met the same criteria after the post-intervention period, in November 2018. See the [Results](#) section for these numbers.

Limitations

One limitation resulted from the fact that no eligibility data was available to determine whether beneficiaries continued to be eligible for Medicaid for the full 6 months before and after intervention letters were mailed. Therefore, as a means to test for Medicaid eligibility when calculating cost avoidance, HID determined how many beneficiaries had any claim for any drug during both the pre-intervention period and the post-intervention period. Those beneficiaries who did not have claims in both periods were not included in the follow-up analysis. It is possible that some patients who had Medicaid eligibility may have been excluded from the follow-up analysis if they had no recent pharmacy claims.

The same eligibility process was applied to the changes in criteria exceptions.

Results

Prescriber Responses to Intervention Letters

A total of 16 coded responses were received from the prescribers who were sent an intervention letter, for a response rate of 8.7% with 16 coded responses. Coded responses are shown in the table below; the following section provides examples of written comments.

Response	Number
Benefits of the drug outweigh the risks	1
Reviewed information and continuing therapy without change	6
Prescriber will reassess and modify drug therapy	2
Tried to modify therapy, patient non-cooperative	1
Has appointment to discuss therapy	2
Prescriber did not write prescription attributed to them	2
Tried to modify therapy, symptoms reoccurred	2
Total Responses	16

Prescriber Feedback on Intervention Letters

In addition to being able to provide information about their course of action following receipt of the intervention letter, prescribers are also able to provide additional feedback on intervention letters. Out of the 16 coded responses received, 10 provided additional feedback. A total of 30% of feedback responses ranked the letters as “Extremely useful”, with 2 ranking it as “Neutral” and 5 ranking it as “Not Useful”.

Changes in Criteria Exceptions

A total of 138 beneficiaries were selected for intervention and had letters mailed to their providers based on the criteria for drug interactions in seizure disorders. Six months after letters were mailed to the prescriber, 88 of the original 138 beneficiaries had at least 1 claim for any drug and could be evaluated. Of those 88 beneficiaries, 42 (47.7%) were found to hit the same criteria in the follow-up period, meaning they had the same therapy problem post-intervention that their prescriber received a letter about. ***The remaining 46 beneficiaries (52.3%) were found to no longer have the same therapy problem.***

Criteria	PRE-Intervention	POST-Intervention		
	Beneficiaries with Letter Mailed	Beneficiaries with Any Drug Claim	Beneficiaries with Same Criteria Exception	% Decrease in Criteria Exceptions
February	10	8	0	100%
March	128	80	42	47.5%

Results Discussion

Within the targeted beneficiary population, improvements in utilization were noted. Six months after intervention letters were mailed, a population of 88 patients had enough data available to evaluate. Of these patients, all of whom met criteria prior to the mailing of prescriber letters, 52.7% no longer met the same criteria 6 months after the letters were mailed.

All drug claims data and some diagnosis data is available for analysis. Any diagnosis data available is processed along with the pharmacy claims data to provide as complete a drug and diagnosis history as possible for each beneficiary. Medical data that includes the cost associated with hospitalization, doctor visits, and emergency room visits is not analyzed as part of the RetroDUR program. However, it is suspected that by improving utilization and the monitoring for adverse events, other medical-associated costs due to adverse drug effects would be reduced, in addition to the reduction in drug expenditures.

Conclusion

The prescribing and utilization of second generation antipsychotics and antiretroviral medications for HIV improved after intervention letters were mailed to prescribers for targeted beneficiaries. For beneficiaries with data available for follow-up 6 months after letters were mailed, 52.7% of them no longer met the same criteria. Claims data for 6 months before and after intervention letters were mailed shows a cost avoidance of drug expenditures of over \$105,000 in the 6-month time period following the mailing of the intervention letters.

Prescribers were encouraged to return response forms to indicate their intended action following the receipt of the intervention letter and patient profile. The response rate was 11.6%. 9 response forms were returned indicating the prescriber's intended action and 10 feedback forms were returned. Prescriber feedback showed that 30% of prescribers indicated the intervention letters were "Extremely Useful."